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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,481

03/09/2004

Samir F. Bassily

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22462

7590

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GATES & COOPER LLP
HOWARD HUGHES CENTER
6701 CENTER DRIVE WEST, SUITE 1050
LOS ANGELES, CA 90045

EXAMINER

LE, HOANGANH T

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,481

Applicant(s)

BASSILY, SAMIR F.

Examiner

HoangAnh T. Le

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 14, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-13, 15-18, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


Hoanganh Le
Primary Examiner

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The Appeal Brief filed on March 07 2006 has been carefully considered by the Examiner. The arguments advanced therein are persuasive with respect to the rejections of record on some points. However, a new rejection is set forth further below. This action is not made final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 14, what is meant by "a random function"?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 14, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fraser (the US patent 6,384,516, of record).

Regarding claims 1, the Fraser reference teaches in figure 2 a direct radiating array (DRA), comprising: a plurality of elements 120, collectively defining a DRA main lobe nearest a DRA boresight and a set of grating lobes nearest the DRA main lobe, wherein each of the grating lobes in the set of grating lobes is angularly displaced from the main lobe by a grating lobe angle that varies asymmetrically about the DRA main lobe (col. 3, lines 13-65).

Regarding claims 2, 19 and 20, the plurality of elements 120 comprises: a first row of elements extending in a first direction, and a second row of elements, parallel to the first row of elements, the second row of elements offset from the first row of elements in the first direction by a stagger distance S . Each element of the first row of elements is spaced apart from an adjacent element in the first row of elements by a distance V ; and each element of the second row of elements is spaced apart from an adjacent element of the second row of elements by the distance V and the second row of elements is spatially displaced from the first row of elements in a direction perpendicular to the first direction by a distance H . The stagger distance S divided by the distance V is between 0 and 1 (figure 2).

Regarding claim 14, figures 1, 2, 4, 5, 6 show the plurality of elements comprises: a first row of elements extending in a first direction, a second row of elements, parallel to the first row of elements, a third row of elements, parallel to the first row of elements and the second row of elements, wherein the second row of elements is disposed between the first row of elements and the third row of elements, and wherein the second row of elements is offset from the first row of elements in the first direction and the third row of

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elements is offset from the first row of elements in the first direction by a stagger distance S that varies as a "random function" of a distance from the first row of elements extending in a second direction perpendicular to the first direction.

Allowable Subject Matter

6. Claims 4-13, 15-18, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed March 07, 2006 have been fully considered but they are not persuasive.

Applicant asserts that the claims contain a limitation that each of the grating lobes in the set of grating lobes is angularly displaced from the main lobe by a grating lobe angle that varies asymmetrically about the DRA main lobe. However, this part of the claims is only a statement of function. Since all claimed structure is shown, the function is applicable there.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HoangAnh T. Le whose telephone number is (571) 272-1823. The examiner can normally be reached on 8:00am-4:30pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoanganh Le
Primary Examiner